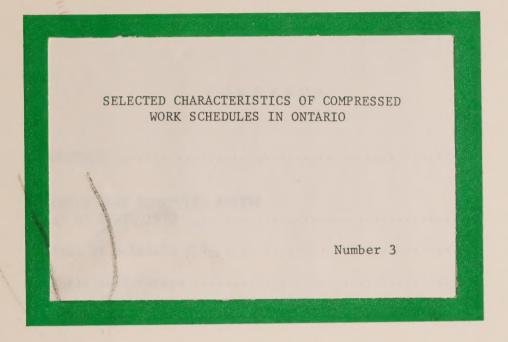
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## EMPLOYMENT INFORMATION SERIES





Ministry of Labour



Research Branch Toronto, Ontario



# SELECTED CHARACTERISTICS OF COMPRESSED WORK SCHEDULES IN ONTARIO



Number 3

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RESEARCH BRANCH

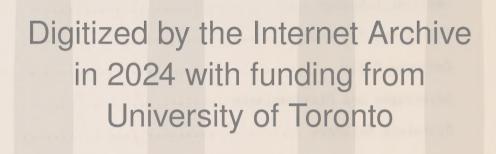
ONTARIO MINISTRY OF LABOUR

JULY 1973

Hon. Fernand Guindon, Minister R. D. Johnston, Deputy Minister

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#### INTRODUCTION

In September 1972, the Ministry of Labour published a paper reviewing the extent and nature of the compressed work schedule in Ontario. This is the second report, which updates and supplements the initial findings by drawing on the experiences of a larger group of firms.

The compressed work schedule can be defined as any rearrangement of a work schedule that both reduces the number of days and increases the number of hours worked per day in a given cycle. The most common example is that of a 4-day, 40-hour week (10 hours per day) replacing the conventional 5-day, 40-hour week (8 hours per day). Employees in firms operating on a compressed work schedule sometimes have a pattern of working hours other than the traditional 7-day cycle. An illustration of this is a 7-shift, 80-hour schedule spread over a 2-week period.

Employers wishing to implement a compressed work schedule are required to obtain approval from the Employment Standards Branch of the Ontario Ministry of Labour to have their employees work in excess of 8 hours per day. This review covers 140 establishments that received approval during the 20-month period July 1, 1971 to February 28, 1973, as well as 17 additional firms referred to in newspaper articles and other sources as having compressed work schedules.

This review does not cover all establishments that have converted to a compressed work schedule, however, since some received permits either prior to July 1, 1971 or after February 28, 1973. For example, during the period March 1, 1973 to May 31, 1973, 43 new permits had been issued to employers intending to adopt compressed work schedules. It is estimated that perhaps over 200 establishments have received permission to operate or are operating compressed work schedules in Ontario.

All of the information presented in this paper was provided directly by representatives of the employers in response to

<sup>1. &</sup>quot;The Compressed Work Week in Ontario", Research Branch, Ontario Ministry of Labour, September 1972.

<sup>2.</sup> Of the 43 new permits, 5 were issued to establishments already having compressed schedules and that are included in the group of 17 additional firms covered by the survey.

a telephone survey carried out during April 1973. It should, therefore, be noted that the survey results express the point of view of management, and not that of the employees. This is especially important in interpreting the information provided on the involvement and attitudes of employees with respect to the changes in their working arrangements. Most of the representatives contacted were senior administrators, but in a few cases the information was supplied by the supervisor directly responsible for the employees involved in the compressed work schedule. In a few instances, the respondents were uncertain about the answers to certain questions asked; in most of these cases they answered "to the best of their knowledge".

The survey covered 157 establishments. Because some of the establishments adopted more than one type of compressed working arrangement, a total of 169 separate schedules were actually involved.

Of the 157 employers surveyed, 97 had at least one compressed schedule in effect as of April 1973 (Table 1).

TABLE 1

STATUS OF COMPRESSED WORK SCHEDULES BY INDUSTRY DIVISION,
ONTARIO, APRIL 1973

Status of	Nu	mber of Es	stablishmen	ts (Sche	dules)	
Compressed - Work Schedules	Total	Manufac- turing		Trade	Finance & Insurance	Other
Active	97 (105)	57 (61)	27 <b>(3</b> 1)	5 (5)	6 (6)	2 (2)
Summer only	15 (15)	8 (8)	4 (4)	3 (3)	n tol	11.70
Introduced then dropped	27 1 (31)	20 (23)	3 (4)	2 (2)	1 (1)	1 (1)
Not adopted	18 (18)	9 (9)	5 (5)	2 (2)	and Charles 16	2 (2)
Total	157 (169)	94 (101)	39 (44)	12 (12)	7 (7)	5 (5)

Fifteen other employers reported that they would be adopting schedules for the summer only. Twenty-seven had introduced but subsequently dropped their schedules, while 18 had not yet adopted them. Of this latter group, five establishments had had their approvals for less than three months.

The first section of this study describes the characteristics of the 105 compressed work schedules which were active as of April 1973. The second section provides selected information on those schedules adopted for the "summer only", "adopted and then dropped", and "not yet adopted". These topics are dealt with briefly because of the small number of firms in each of the categories, and because much of the information concerning the characteristics of these schemes is similar to that outlined in the section on active schedules. The final section of the study provides a brief overview of the data as well as a discussion of some of the most significant findings.

## COMPRESSED WORK SCHEDULES ACTIVE AS OF APRIL 1973

Manufacturing was the most heavily represented sector among the 97 establishments with active compressed work schedules (Table 1). Within manufacturing, the chemical and chemical products, and the printing and publishing industries each had 10 firms with active schedules. There were 16 hospitals with active schedules in the service industries, while 5 firms were involved in trade, and 6 in finance and insurance, 4 of which were insurance companies.

The above figures tend to overstate the extent to which compressed work schedules have been accepted in industry since almost one-third of the firms are still experimenting with their schedules. As of April 1973, only 72 of the 105 active schedules had been implemented permanently. The remainder were adopted on a trial basis, with trial periods ranging from one to 12 months.

### Type of Schedule

As indicated in Table 2, 60 per cent of the active schedules are based on the 4-day work week, with hours set at 40, less than 40, or more than 40 per week. Nine schedules involve a 3-day, 36-hour weekly arrangement. In 12 others the employees work 3 twelve-hour days and then have the next 3 days off. The schedule most popular in hospitals is a 7-shift, 80-hour scheme. Under this plan, nurses work 6 twelve-hour shifts and one eight-

hour shift to accumulate 80 working hours over a 2-week period. The "other" category includes such working patterns as: 3 days, less than 36 hours per week; 4 days on, 3 days off, then 3 nights on and the next 4 days off over a 14 day cycle; and a variety of other more complicated schemes.

In three-quarters of the conversions to a compressed work schedule, the number of hours worked within a given cycle did not change. In the remainder, the number of hours worked increased or decreased slightly. In virtually every case of reduced hours, hourly wage rates were increased to assure employees of the same take-home pay as before.

TABLE 2

TYPE OF ACTIVE COMPRESSED WORK SCHEDULE BY INDUSTRY DIVISION, ONTARIO, APRIL 1973

		N	umber of S	chedule	S	÷
Type of Work Schedule	Total	Manufac- turing	Services	Trade	Finance & Insurance	Other
4 days, 40 hours per week	44	34	5	4	1	-
4 days, more than 40 hours per week	c 4	2	2	-	-	-
4 days, less than 40 hours per week	k 15	7	5	-	2	1
3 days, 36 hours per week, 4 days off	9	3	3	1	2	-
3 days, 36 hours, 3 days off	12	9	1	-	1	1
6 days, 72 hours						
plus 1 day, 8 hours in 2 weeks	8	-	8	7 - 1	had -	-
Other	13	6	7	-	-	-
Total	105	61	31	5	6	2

## Employee Coverage

The 97 establishments with active schedules had a total employment of 62,227 of which only 6,602 or 10.6 per cent were actually involved in a compressed work scheme (Table 3). These figures suggest that, by itself, the number of firms or schedules does not give an accurate account of the extent to which compressed schedules have been adopted. Only 10 establishments had all their employees working on the compressed arrangements. Twenty-five others included all non-office personnel in their schemes, while the remainder extended the schedules to specify groups of employees. Almost two-thirds of the employees on a compressed schedule worked in manufacturing, and more than one-fifth worked in services. Three-quarters of those in services were employed in hospitals.

TABLE 3

NUMBER AND PROPORTION OF EMPLOYEES ON COMPRESSED WORK SCHEDULES BY INDUSTRY DIVISION,
ONTARIO, APRIL 1973

	Total Employment in Firms with Compressed Work	Compres	yees on sed Work dules
Industry	Schedules	Number	Per Cent
Manufacturing	35,637	4,298	12.1
Services	18,787	1,512	8.1
Trade	4,335	592	13.6
Finance & Insurance	3,150	176	5.6
Other	318	24	7.5
Total	62,227	6,602	10.6

Table 4 shows the number of the employees by establishment size. Although the compressed schedules have been adopted in each establishment size category, three-quarters of the employees involved in these schemes worked in establishments with 100 or more employees. However, only a small proportion of the total number of employees in the two largest establishment size categories participated in compressed schedules.

Eighty-five per cent of the employees working on compressed schedules in manufacturing were in firms with over 100 employees, while almost 75 per cent of those in services worked in firms of 500 or more employees.

NUMBER OF ESTABLISHMENTS AND NUMBER AND PROPORTION OF EMPLOYEES ON COMPRESSED WORK SCHEDULES BY EMPLOYMENT SIZE CATEGORY OF ESTABLISHMENT, ONTARIO, APRIL 1973

Employment Size	Number of	Total		on Compressed edules
	Establishments		Number	Per Cent
Less than 20	8	123	97	78.9
20 - 49	14	466	312	67.0
50 - 99	12	812	424	52.2
100 - 199	14	2,165	963	44.5
200 - 499	25	8,316	1,925	23.1
500 and over	24	50,345	2,881	5.7
Total	97	62,227	6,602	10.6

Table 5 shows the distribution of the employees working on compressed schedules by the type of schedule. Almost two-thirds of the 6,602 employees on compressed schedules work a 4-day week, and more than one-half of these or 35 per cent of the total work a 10-hour day. In comparison, less than 20 per cent of these 6,602 employees normally work a 3-day week, while more than 25 per cent of the total normally work a 12-hour day.

Several occupations involved in compressed schedules are common to different industries. These include jobs related to computer operations, such as keypunching and data processing, as well as maintenance, first aid, and security. Other occupations are specific to particular industry divisions. In manufacturing, the majority of employees on compressed schedules

were production workers, involved in such operations as assembly, moulding, extrusion, and printing. Nursing represented the largest group in the service industries.

TABLE 5

DISTRIBUTION OF EMPLOYEES WORKING ON COMPRESSED WORK SCHEDULE,
ONTARIO, APRIL 1973

			on Compressed Schedules
Type of Work Schedule	Schedules	Number	Per Cent
4 days, 40 hours per week	44	2,319	35.1
4 days, more than 40 hours per week	4	104	1.5
4 days, less than 40 hours per week	15	1,734	26.3
3 days, 36 hours per week, 4 days off	9	707	10.7
3 days, 36 hours, 3 days off	12	552	8.4
6 days, 72 hours plus 1 day, 8 hours in 2 weeks	8	508	7.7
Other	13	678	10.3
Total	105	6,602	100.0

Many employees worked in departments that operate on a continuous basis. Thirty per cent of those in manufacturing and 67 per cent of those in services were employed in areas with 24-hour operations.

Employees were members of a union in almost 20 per cent of the active work schedules. In all, over 1,000 of the 6,602 employees on compressed work schedules were union members. In another 3 per cent of the schedules the workers belonged to

employee association. These covered fewer than 200 employees. All of the unions and one of the employee associations were in manufacturing.

### Initiative for Change

It has sometimes been suggested that the employer is most often responsible for the idea of initiating the compressed work schedule. This survey found that the idea of adopting a compressed schedule was first suggested by the employer in only 28 of the 97 firms with active schedules. The employer and the employees were jointly responsible in 32 firms, and the employees alone were responsible in 24 firms. In the 13 remaining firms, the employer indicated uncertainty as to exactly who was responsible for initially proposing the schedule. The fairly significant proportion of uncertain responses together with the possibility of misinterpreting the question posed, make it difficult to draw firm conclusions regarding the initiative for change.

## Employee Polls

The Employment Standards Branch gives employees approval for a work day exceeding 8 hours on the condition that a majority of the employees are in favour of such working arrangements. In 82 per cent of the active schedules, formal polls were taken before implementation to determine the degree of employee support for the scheme (Table 6). The majority of employees supported the proposed schedules in all but one of these firms. In 57 of the polls, over 80 per cent of the employees were in favour of the change. The employer reported that no formal poll had been taken for 13 schedules. However, in almost one-half of these, fewer than 20 employees were involved, so that the employer would be able to determine the degree of support without the use of a formal poll.

Fifteen firms indicated that they had taken subsequent polls to keep in touch with employee opinion. Ten of these showed an increase in employee support while the other five indicated a decrease, but still with a majority favouring conversion to a compressed schedule.

TABLE 6

TYPE OF POLL AND DEGREE OF EMPLOYEE SUPPORT BEFORE IMPLEMENTATION OF ACTIVE COMPRESSED WORK SCHEDULES, ONTARIO, APRIL 1973

Type of Poll and Degree	Sch	edules
of Employee Support	Number	Per Cent
Formal poll with majority support	86	82.0
Formal poll with majority opposed	1	0.9
No formal poll	13	12.4
Uncertain	5	4.7
Total	105	100.0

## Advantages and Disadvantages

Each firm was asked whether or not its compressed work schedule was responsible for any of the following advantages and disadvantages: increased productivity or service, improved recruiting potential, reduced absenteeism, decreased labour turnover; a strain on supervision, problems with scheduling or internal servicing, fatigue, or problems with customers. They were also requested to list any other advantages or disadvantages that had resulted from the conversion. Some employers were uncertain because of their limited experience with the schedules. A few establishments had assembled a considerable amount of information about the effects, while others were only able to provide impressions.

Table 7 shows the responses of the employers to the advantages they were asked about as well as those they volunteered. Increased productivity was the most common advantage indicated, applying to 60 per cent of the active schedules. Reduced absenteeism was the next most common advantage, involving 57 per cent of the schedules. In four cases, however, this reduction was short-lived, since absenteeism returned to its pre-conversion level a few months after implementation.

TABLE 7

ADVANTAGES RESULTING FROM CONVERSIONS TO COMPRESSED WORK SCHEDULES, BY INDUSTRY DIVISION, ONTARIO, APRIL 1973

			Act	Active Schedules Experiencing the Advantage	es Experie	ncing the	Advantage	
	Advantages	Tot No.	Total %	Manu- facturing	Services	Trade	Finance & Insurance	Other
a)	Asked							
	Increased productivity	63	0.09	38	18	en (	2(1)	2
	Decreased absenteeism	60 51	57.1	37(3)*	16(1)	ი 4	7 m	77 m
	Improved recruiting potential Decreased turnover	36	34.3	22	0	. 4	1	Н
p)	Volunteered							
	Improved employee morale	50	47.6	35	∞.	c	1	3
	Extra day(s) off for the employee Better equipment utilization and/or	32	30.5	19	11	1	<del></del> -1	H
	longer production runs	30	28.6	23	Н	m	2	-
	Improved scheduling	17	17.0	15	2	ı	1	ı
	Improved communications	7	6.7	c		1	2	
	Reduced overtime	7	6.7	5	Н	Н	1	1
	Reduced commuting time for the employee	m	2.9	. 2	1	ş	1	Н

Brackets indicate the number of schedules where the advantage was apparent for only a short period after the conversion.

Improved employee morale was by far the most common "volunteered" advantage cited, applying to 48 per cent of the active schedules. Extra time off for the employee, and better equipment utilization and/or longer production runs were the only other significant volunteered advantage, both involving about 30 per cent of the schedules.

The firms reported considerably fewer disadvantages than advantages. Table 8 shows the responses of the employers concerning both the specified and volunteered disadvantages. Employee fatigue was the most significant disadvantage indicated, involving more than 30 per cent of the active schedules. Covering absenteeism and holidays, and/or problems getting overtime was the most common volunteered disadvantage applying to 20 per cent of the schedules.

In 10 firms, at least one employee resigned as a result of the implementation of a compressed work schedule. Eight of these firms had had formal polls with over 60 per cent employee support.

Despite the disadvantages reported, most of the employers with active schedules felt that the advantages outweighed the disadvantages.

In reviewing the advantages and disadvantages it should be remembered that all of the responses shown were made by management. This is especially important in determining the relative significance of those advantages and disadvantages that would accrue to the employees.

#### Statutory Holidays

Firms were asked how their policies regarding statutory holidays had been affected by the implementation of a compressed work schedule (Table 9). Fifty-nine of the 97 establishments with active schedules reported that they were now paying employees for the same total number of statutory holiday hours as were paid before conversion. Fifty-five of these establishments retained the same number of statutory holidays (between 8 and 11) but paid for the pre-conversion daily hours (usually 8) rather than the actual daily hours now worked. Four establishments paid for the full number of hours worked per day under the compressed schedules but reduced the number of statutory holidays for which they paid.

Thirty-four establishments reported that they were now paying their employees for a greater total number of statutory

TABLE 8

DISADVANTAGES RESULTING FROM CONVERSIONS TO COMPRESSED WORK SCHEDULES, BY INDUSTRY DIVISION, ONTARIO, APRIL 1973

			Ac	tive Schedu	les Experier	cing the	Active Schedules Experiencing the Disadvantages	ses
	Disadvantages	Total	[a1] %	Manu- facturing	Services	Trade	Finance & Insurance	Other
a)	a) Asked							
	Fatigue Problems with supervision Scheduling or internal servicing problems Problems with customers or external servicing	33 10 9	31.4 9.5 8.6 4.8	22(13) <b>*</b> 7(1) 4(1) 3(2)	8 2 2 2(1)	3(1)	1 -1 1	1141
p)	Volunteered							
	Covering absenteeism and holidays or problems getting overtime Payroll or other administrative problems Communications Resignations resulting from conversion Family or older workers' problems Extra day off a problem	21 14 11 10 7	20.0 113.3 10.5 9.5 6.7 2.9	9 6 5(1) 7 2 2	9 6 5(2) 2 4 1		- 1 - 1 1 1	<b>⊢          </b>

Brackets indicate the number of schedules where the disadvantage was apparent for only a short period after the conversion. -k

TABLE 9

CHANGES IN STATUTORY HOLIDAY POLICIES AFTER IMPLEMENTATION OF ACTIVE COMPRESSED WORK SCHEDULES IN ONTARIO, APRIL 1973

Statutory Holiday Policy		of Firms Per Cent
The same total number of paid statutory holiday hours:	59	60.8
(a) the same number of paid hours per day, and the same number of paid days per year	55	56.7
(b) an increased number of paid hours per day, and a decreased number of paid days per year	r 4	4.1
An increased total number of paid statutory holiday hours:	34	35.1
(a) an increased number of paid hours per day, and the same number of paid days per year	32	33.0
(b) an increased number of paid hours per day, and an increased number of paid days per year	ar 2	2.1
Not paid for statutory holidays, and same number of days off	<u>3</u>	3.1
Other	1	1.0
Total	97	100.0

holiday hours. Thirty-two retained the same number of holidays but paid for the increased hours per day now worked under the compressed work schedule. Two firms stated that they paid not only for the increased number of hours per day now worked, but also for more statutory holidays than before their conversion.

## OTHER COMPRESSED WORK SCHEDULES AS OF APRIL 1973

## Compressed Work Schedules Adopted for the Summer Only

As of April 1973, 15 of the establishments surveyed reported that they would be adopting a compressed work schedule

for the summer months, in most cases May through September. All but one of these firms indicated that they intended to use the compressed schedule during this summer as well as in succeeding ones. As shown in Table 1, there were eight firms in manufacturing, four in services, and three in trade.

More than 1,300 employees were affected by these summer schedules. This includes 4 establishments where the schedule is to be extended to all employees, and 5 where it is to be extended to all non-office employees.

The most common type of schedule adopted was based on the 4-day week, however, a few firms stated that they were implementing a  $4\frac{1}{2}$ -day week.

Nine firms had had previous experience with the schedules during the summer months. Based on these experiences, most firms reported decreased absenteeism (especially on the last day of the work cycle), improved employee morale, and a general satisfaction with their schedules.

Most of the firms indicated that their schedules were implemented as an alternative to the traditional "summer hours" system. In a few instances, establishments also suggested that the schedules enabled the company to meet increased production demands during the summer months. One firm stated that it was able to carry out annual maintenance and repairs on the fifth day.

## Compressed Work Schedules Adopted and then Dropped

When contacted, 27 establishments had implemented and subsequently dropped compressed work schedules. In terms of industry, there were 20 firms in manufacturing, 3 in services, and 2 in trade. Together these firms had more than 650 employees working on compressed arrangements before they were dropped.

Nine establishments had adopted their schedules for special circumstances — to meet peak production demands or during periods of expansion and modernization of their facilities. In all but one of the 9 cases mentioned, the employer indicated that the compressed schedule would be implemented again under similar circumstances. Although employee fatigue was suggested as being a problem by more than two-thirds of the 27 firms, it was seen as the primary reason for discontinuing their schedules by only 10. Fatigue was a problem in the production and assembly areas in manufacturing, as well as in nursing. The 8 remaining firms reported a combination of administrative problems and decreases

in productivity as being primarily responsible for dropping the schedules. These included problems with scheduling and overtime, as well as adjustment difficulties in the payroll and accounting departments.

## Compressed Work Schedules Not Yet Adopted

When contacted, 18 establishments that had received approvals had not implemented compressed work schedules. In 11 firms the employees or their representatives rejected the schemes, expressing concern about adjustment problems and the longer hours. Several of the other firms had not yet been able to sort out the various administrative and other problems associated with the conversion. In at least 2 establishments the employers rejected the employee proposals on the grounds that there would be no direct benefits from the conversion accruing to the firm.

Overall, 13 of the 18 employers stated that they were still interested in possibly adopting a compressed schedule. A number of firms reported that they were experimenting with the "flexible work schedule", and 5 of these suggested that they would probably adopt it instead of the compressed work schedule.

### SUMMARY AND CONCLUSIONS

The survey covered 157 firms involving 169 schedules. Ninety-seven firms had a total of 105 active compressed schedules as of April 1973, while 15 other establishments indicated that they were going to implement their schedules for the summer only. There were 27 firms which had introduced but subsequently dropped their schedules, and 18 which had not yet adopted them.

In terms of the firms receiving approvals from the Ministry of Labour, 19 establishments had introduced their schemes since the end of the first study, that is, during the 8-month period July 1, 1972 to February 28, 1973. The other newly covered companies implemented their schedules prior to July 1972.

When surveyed, 6,602 employees worked on compressed arrangements. The 19 establishments with new schedules accounted for more than 700 of the total employees. However, despite this increase, less than one-half of one per cent of Ontario's labour force are on compressed schedules.

About 17 per cent of the 6,600 employees were members of a union or an employee association. These 1,100 employees were involved in 23 per cent of the active schedules.

The 4-day, 40-hour scheme remains the most common type of arrangement, applying to over 40 per cent of the firms. Furthermore, two-thirds of all active schedules have been introduced in selected departments, and over one-third exist in departments operating on a continuous or nearly continuous basis.

According to firms with active schedules, increased productivity, reduced absenteeism, improved recruiting potential, and improved employee morale were the most significant benefits of the conversions. It is generally believed that the extra days off, reduced commuting time, and reduced compulsory overtime are responsible for improved employee morale, reduced absenteeism and decreased labour turnover. These benefits, combined with improved scheduling and better equipment utilization, were cited as the major factors resulting in increased productivity or improved service.

Employee fatigue was the most significant disadvantage reported. However, almost one-half of the firms reporting a fatigue problem indicated that it was a short-term disadvantage, subsiding after the employees adjusted to their new working patterns. In severalinstances, employers suggested that administrative problems such as scheduling and internal communications were only short-term disadvantages, subsiding after an adjustment period. It was also indicated by four establishments that decreased absenteeism was a short-term advantage returning to its pre-conversion level a few months after implementation.

More than one-third of the employers with active schedules reported that they were paying their employees for a greater total number of statutory holiday hours than under their old working arrangements. However, the remaining employers either did not pay, or paid for the same total number of statutory holiday hours.

Twelve firms (including 6 with active and 6 with inactive schedules) indicated that they were interested in experimenting with the flexible work schedule, in most cases as an alternative to the compressed work arrangement. The flexible system refers

to a scheme in which an employee is free to come and go, most often within certain fixed hour limits, as long as he works a given number of hours during the pay period. Some researchers have suggested that flexible working hours will become more important than the compressed work schedule because of the increased freedom available to employees.

In retrospect, it is important to note that the survey provided the point of view, and often the impressions, of management. The information is incomplete in some areas, especially with respect to the impact of the schemes on employees, and the reactions of employees to changes in the work week.

The findings, as well as outlining many of the significant features of compressed work schedules, indicate some of the areas requiring further study. Employee attitudes should be obtained directly from workers, not only to supplement the information provided by employers, but also to gain a better appreciation of the much broader socio-economic impact of changing work patterns. In addition, a more in-depth study would give a better understanding of the advantages and disadvantages and their various interrelationships. Especially important is the effect of fatigue on the occupational safety and health of the employee, as well as on his social and family life.



